GenCore version 4.5

OM protein - protein search, using sw model

Run on: January 7, 2002, 15:40:13 ; Search time 154.28 Seconds
(without alignments)
22.086 Million cell updates/sec

Title: US-08-569-749-8
Perfect score: 267
Sequence: 1 LAKAGFYYIGPGDRVACFAC.....WEPKDNAMSEHLRHFPKCPF 46

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_1101:*
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14: /SIDS2/gcgdata/geneseq/geneseqp/AA1993.DAT:*
15: /SIDS2/gcgdata/geneseq/geneseqp/AA1994.DAT:*
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19: /SIDS2/gcgdata/geneseq/geneseqp/AA1998.DAT:*
20: /SIDS2/gcgdata/geneseq/geneseqp/AA1999.DAT:*
21: /SIDS2/gcgdata/geneseq/geneseqp/AA2000.DAT:*
22: /SIDS2/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	267	100.0	46	18	AAW13550	Human c-IAP2 repea
2	267	100.0	604	18	AAW19747	Human inhibitor of
3	267	100.0	604	18	AAW13546	Human c-IAP2. Hom
4	267	100.0	604	20	AAY52703	Human cellular inh
5	267	100.0	604	20	AAY33997	Human cellular inh
6	267	100.0	1141	22	AAB50694	Human API2-MLT chi
7	264	98.9	604	18	AAW19582	Human apoptosis in
8	264	98.9	604	19	AAW69295	Human HIAP-1 prote
9	259	97.0	306	22	AAU02925	Angiotensin conver
10	248	92.9	46	18	AAW13549	Human c-IAP1 repea
11	248	92.9	438	17	AAW04583	Human inhibitor of
12	248	92.9	618	18	AAW19746	Human inhibitor of
13	248	92.9	618	18	AAW19583	Human apoptosis in
14	248	92.9	618	18	AAW13545	Human c-IAP1. Hom
15	248	92.9	618	19	AAW69296	Human HIAP-2 prote
16	248	92.9	618	20	AAY33998	Human cellular inh
17	247	92.5	612	18	AAW13555	Murine c-IAP. Mus
18	247	92.5	612	19	AAW69299	Murine HIAP-2 prot
19	244	91.4	591	18	AAW19586	Mouse apoptosis in
20	235	88.0	600	19	AAW69298	Murine HIAP-1 prot
21	235	88.0	602	18	AAW19585	Mouse apoptosis in
22	182	68.2	497	18	AAW19581	Human apoptosis in
23	182	68.2	497	19	AAW69294	Human XIAP protein
24	182	68.2	497	21	AAY99985	Human X-linked inh
25	182	68.2	497	21	AAY59451	Human XIAP protein
26	177	66.3	496	18	AAW19745	Mouse inhibitor of
27	177	66.3	496	18	AAW19584	Mouse apoptosis in
28	177	66.3	496	19	AAW69297	Murine XIAP protei
29	145	54.3	236	21	AAY81440	Human TIAP (an inh
30	145	54.3	236	22	AAE00365	Human IAP-like pro
31	145	54.3	236	22	AAE00366	Chimpanzee IAP-lik
32	145	54.3	498	18	AAW19748	Drosophila inhibit
33	144	53.9	236	22	AAE00367	Gorilla IAP-like p
34	141	52.8	1232	17	AAR98217	Neuronal apoptosis
35	141	52.8	1295	20	AAY14080	Gonadotropic hormo
36	141	52.8	1295	20	AAY09540	Human apoptosis in
37	141	52.8	1403	18	AAW20032	Neuronal apoptosis
38	141	52.8	1403	18	AAW20033	Neuronal apoptosis
39	141	52.8	1403	20	AAY14079	Gonadotropic hormo
40	141	52.8	1403	20	AAY09539	Human apoptosis in
41	141	52.8	1403	21	AAY88053	Human NAIP protein
42	131	49.1	48	18	AAW13551	Human c-IAP1 repea
43	131	49.1	438	22	AAB48191	Drosophila mutant
44	129	48.3	434	22	AAB48195	Drosophila mutant
45	129	48.3	438	22	AAB48188	Drosophila wild-ty

ALIGNMENTS

RESULT 1
AAW13550
ID AAW13550 standard; Protein; 46 AA.
XX
AC AAW13550;
XX
DT 22-JUL-1997 (first entry)
XX
DE Human c-IAP2 repeat 2.
XX
KW IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW myocardial infarction; nephritis; HIV.
XX
OS Homo sapiens.
XX
PN WO9706182-A1.
XX
PD 20-FEB-1997.
XX
PF 06-AUG-1996; 96WO-US12860.
XX
PR 08-DEC-1995; 95US-0569749.
PR 08-AUG-1995; 95US-0512946.
XX
PA (TULA-) TULARIK INC.
XX
PI Goeddel DV, Rothe M;
XX
DR WPI; 1997-154209/14.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX

PS Claim 3; Page 24; 35pp; English.
XX
CC The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC AAT61590/T61591) comprise a series of defined structural domain
CC repeats and/or a RING finger domain; in particular, at least two of
CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC sequences derived from these human genes.
CC The nucleic acid is used for recombinant prodn. of human cellular
CC inhibitor of apoptosis protein which modulates apoptosis
CC regulation. The nucleic acids are useful in therapies where
CC increased cell-specific apoptosis is desired, e.g. in restinosis,
CC inflammatory disease states, myocardial infarction, glomerular
CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC They can also be used in conditions requiring a reduction in
CC apoptosis.
XX
SQ Sequence 46 AA;

Query Match 100.0%; Score 267; DB 18; Length 46;
Best Local Similarity 100.0%; Pred. No. 5.4e-27;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||||||||||||||||||||||||||||||||||||||||||||||
Db 1 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 46

RESULT 2
AAW19747
ID AAW19747 standard; Protein; 604 AA.
XX
AC AAW19747;
XX
DT 16-SEP-1997 (first entry)
XX
DE Human inhibitor of apoptosis protein homologue MIHC.
XX
KW Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHC;
KW degenerative disease; infectious disease; autoimmune disease;
KW cancer; therapy; diagnosis.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Region 29..97
FT /label= BIR
FT Region 169..236
FT /label= BIR
FT Region 255..323
FT /label= BIR
FT Region 556..593
FT /label= RING_finger
XX
PN WO9723501-A1.
XX
PD 03-JUL-1997.
XX
PF 20-DEC-1996; 96WO-AU00827.
XX
PR 22-DEC-1995; 95AU-0007275.
XX
PA (AMRA-) AMRAD OPERATIONS PTY LTD.
XX
PI Vaux DL;
XX
DR WPI; 1997-350966/32.
DR N-PSDB; AAT72712.
XX
PT Isolated protein homologues of viral inhibitors of apoptosis - used
PT to modulate apoptosis for treatment of degenerative, infectious or
PT autoimmune diseases and cancer
XX
PS Claim 9; Page 58-62; 136pp; English.
XX
CC Mammalian IAP homologue C (MIHC) (AAW19747) is a human homologue of
CC baculovirus inhibitor of apoptosis protein (IAP). Its amino acid
CC sequence was deduced from a cDNA clone (see also AAT72712) isolated
CC from a human foetal liver cDNA library using primers based on
CC human EST sequences that resembled the BIR repeats of Orygia
CC pseudotsuguta polyhedrosis virus IAP. IAP homologues (see also
CC AAW19745-46 and AAW19748-52) and their derivatives and chemical
CC analogues can be used in methods for modulating apoptosis in animal
CC cells, specifically for treatment, by inhibition, of degenerative
CC and infectious disease or, by promotion, of cancer and autoimmune
CC disease.
XX
SQ Sequence 604 AA;

Query Match 100.0%; Score 267; DB 18; Length 604;
Best Local Similarity 100.0%; Pred. No. 8.4e-26;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||||||||||||||||||||||||||||||||||||||||||||||
Db 189 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234

RESULT 3
AAW13546
ID AAW13546 standard; Protein; 604 AA.
XX
AC AAW13546;
XX
DT 22-JUL-1997 (first entry)
XX
DE Human c-IAP2.
XX
KW IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW myocardial infarction; nephritis; HIV.
XX
OS Homo sapiens.
XX
PN WO9706182-A1.
XX
PD 20-FEB-1997.
XX
PF 06-AUG-1996; 96WO-US12860.
XX
PR 08-DEC-1995; 95US-0569749.
PR 08-AUG-1995; 95US-0512946.
XX
PA (TULA-) TULARIK INC.
XX
PI Goeddel DV, Rothe M;
XX
DR WPI; 1997-154209/14.
DR N-PSDB; AAT61591.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX
PS Disclosure; Page 21-23; 35pp; English.
XX
CC The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC AAT61590/T61591) comprise a series of defined structural domain
CC repeats and/or a RING finger domain; in particular, at least two of
CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC sequences derived from these human genes.
CC The nucleic acid is used for recombinant prodn. of human cellular

CC inhibitor of apoptosis protein which modulates apoptosis
CC regulation. The nucleic acids are useful in therapies where
CC increased cell-specific apoptosis is desired, e.g. in restinosis,
CC inflammatory disease states, myocardial infarction, glomerular
CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC They can also be used in conditions requiring a reduction in
CC apoptosis.
XX
SQ Sequence 604 AA;

Query Match 100.0%; Score 267; DB 18; Length 604;
Best Local Similarity 100.0%; Pred. No. 8.4e-26;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||||||||||||||||||||||||||||||||||||||||||||||
Db 189 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234

RESULT 4
AAY52703
ID AAY52703 standard; Protein; 604 AA.
XX
AC AAY52703;
XX
DT 26-JAN-2000 (first entry)
XX
DE Human cellular inhibitor of apoptosis-2 protein.
XX
KW Identification; genetic target; gene modulation; human;
KW antisense oligonucleotide; phosphorothioate; target validation;
KW nucleotide sequence-based technology; antisense drug discovery.
XX
OS Homo sapiens.
XX
PN WO9953101-A1.
XX
PD 21-OCT-1999.
XX
PF 13-APR-1999; 99WO-US08268.
XX
PR 13-APR-1998; 98US-0081483.
PR 28-APR-1998; 98US-0067638.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Cowsert LM, Baker BF, McNeil J, Freier SM, Sasmor HM, Brooks DG;
PI Ohasi C, Wyatt JR, Borchers AH, Vickers TA;
XX
DR WPI; 1999-620446/53.
DR N-PSDB; AAZ41005.
XX
PT Identifying compounds which modulate expression of nucleic acids, used
PT to provide compounds having defined physical, chemical or bioactive
PT properties, e.g. antisense activity -
XX
PS Example 20; Page 197-202; 264pp; English.
XX
CC A method has been developed of defining a set of compounds that modulate
CC the expression of a target nucleic acid (tNA) sequence via binding of
CC the compounds with the tNA sequence. The method comprises generating a
CC library of virtual compounds in silico according to defined criteria,
CC and evaluating in silico the binding of the virtual compounds with the
CC tNA according to defined criteria. Also described are: (1) a method of
CC defining a set of oligonucleotides (ONs) that modulate the expression of
CC a tNA sequence via binding of the ONs with the tNA sequence comprising
CC generating a library of virtual compounds in silico according to defined
CC criteria, and evaluating in silico the binding of the virtual ONs with
CC the tNA according to defined criteria; and (2) a method of defining a
CC set of compounds that modulate the expression of a tNA sequence via
CC binding of the compounds with the tNA. The methods can be used for the
CC generation and identification of synthetic compounds having defined
CC physical, chemical or bioactive properties. Information gathered from
CC assays of such compounds is used to identify nucleic acid sequences that
CC are tractable to a variety of nucleotide sequence-based technologies,
CC e.g. antisense drug discovery and target validation. AAZ40852 to
CC AAZ41220, and AAY52701 to AAY52706, represent sequences used in the
CC exemplification of the present invention.
XX
SQ Sequence 604 AA;

Query Match 100.0%; Score 267; DB 20; Length 604;
Best Local Similarity 100.0%; Pred. No. 8.4e-26;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||||||||||||||||||||||||||||||||||||||||||||||
Db 189 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234

RESULT 5
AAY33997
ID AAY33997 standard; Protein; 604 AA.
XX
AC AAY33997;
XX
DT 26-NOV-1999 (first entry)
XX
DE Human cellular inhibitor of apoptosis-2 sequence.
XX
KW Cellular Inhibitor of Apoptosis-2; antisense; diagnostic; therapeutic;
KW c-IAP-2; prophylaxis; infection; inflammation; tumor formation.
XX
OS Homo sapiens.
XX
PN US5958771-A.
XX
PD 28-SEP-1999.
XX
PF 03-DEC-1998; 98US-0205144.
XX
PR 03-DEC-1998; 98US-0205144.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Bennett CF, Cowsert LM, Ackermann EJ;
XX
DR WPI; 1999-561046/47.
DR N-PSDB; AAZ22096.
XX
PT Antisense compounds complementary to Cellular Inhibitor of Apoptosis-2
PT useful for e.g. diagnostics, therapeutics, and as research reagents -
XX
PS Example 13; Columns 45-50; 33pp; English.
XX
CC The invention provides antisense compounds of 8-30 nucleotides that
CC inhibit the expression of human Cellular Inhibitor of Apoptosis-2
CC (c-IAP-2). The antisense compounds may be used for diagnostics,
CC therapeutics (for modulating the expression of c-IAP-2), prophylaxis
CC (e.g. to prevent or delay infection, inflammation, or tumor formation),
CC as research reagents (e.g. to distinguish between members of a biological
CC pathway) and in kits. The present sequence represents the human cellular
CC inhibitor of apoptosis-2.
XX
SQ Sequence 604 AA;

Query Match 100.0%; Score 267; DB 20; Length 604;
Best Local Similarity 100.0%; Pred. No. 8.4e-26;
Matches 46; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||||||||||||||||||||||||||||||||||||||||||||||
Db 189 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234

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RESULT   6
AAB50694
ID   AAB50694 standard; Protein; 1141 AA.
XX
AC   AAB50694;
XX
DT   19-MAR-2001  (first entry)
XX
DE   Human API2-MLT chimeric protein sequence.
XX
KW   Human; API2-MLT chimera; chimeric; apoptosis inhibitor 2; MLT; API2;
KW   mucosa-associated lymphoid tissue lymphoma associated translocation;
KW   chromosome 11 region q21-22.3; chromosome 18 region q21.1-22;
KW   molecular characterisation; chromosome translocation; carcinogenesis;
KW   fusion protein; malignancy.
XX
OS   Chimeric - Homo sapiens.
OS   Synthetic.
XX
PN   WO200073500-A1.
XX
PD   07-DEC-2000.
XX
PF   26-MAY-2000; 2000WO-EP04796.
XX
PR   27-MAY-1999;   99EP-0201683.
XX
PA   (VLAA-) VLAAMS INTERUNIVERSITAIR INST BIOTECHNOG.
XX
PI   Baens M,  Marynen P,  Dierlamm J;
XX
DR   WPI; 2001-061556/07.
DR   N-PSDB; AAC90972.
XX
PT   Determining if a tissue sample has a chromosome (11:18) translocation
PT   associated with malignancies by amplifying a nucleic acid sample using
PT   primers complementary to chromosome 11 region q21-22.3 and chromosome
PT   18 region q21.1-22  -
XX
PS   Claim 12; Fig 5; 47pp; English.
XX
CC   The present invention describes a method for determining if a tissue
CC   sample comprises a cell with a chromosome (11:18) translocation
CC   associated with malignancies such as mucosa-associated lymphoid tissue
CC   (MALT) lymphomas. The method comprises subjecting a sample nucleic acid
CC   to amplification using primers complementary to sequences which are on
CC   chromosome 11 region q21-22.3 and on chromosome 18 region q21.1-22. The
CC   method can be used for determining if a tissue sample or analogue
CC   comprises a chromosome (11:18) translocation associated with malignancies
CC   such as mucosa-associated lymphoid tissue lymphomas. The nucleic acid or
CC   the antibody may be used as a probe for detection, for hybridisation to
CC   southern blot cell DNAs or for in situ hybridisation of cells, or for
CC   determining the presence of complementary DNA. The present sequence
CC   represents the specifically claimed chimeric human apoptosis inhibitor 2
CC   (API2)/MALT-lymphoma associated translocation (MLT) protein.
XX
SQ   Sequence   1141 AA;


  Query Match             100.0%;  Score 267;  DB 22;  Length 1141;
  Best Local Similarity   100.0%;  Pred. No. 1.6e-25;
  Matches   46;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           |||||||||||||||||||||||||||||||||||||||||||||||
Db     189 lakagfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234


RESULT   7
AAW19582
ID   AAW19582 standard; Protein; 604 AA.
XX
AC   AAW19582;
XX
DT   02-SEP-1997  (first entry)
XX
DE   Human apoptosis inhibitor HIAP-1.
XX
KW   Apoptosis inhibitor; HIAP-1; HIV; AIDS; neurodegeneration;
KW   myelodysplastic syndrome; ischaemia; myocardial infarction; stroke;
KW   reperfusion injury; toxin-induced liver disease; gene therapy;
KW   diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          29..96
FT                   /label= BIR-1
FT   Domain          169..235
FT                   /label= BIR-2
FT   Domain          255..322
FT                   /label= BIR-3
FT   Domain          546..591
FT                   /label= Ring_zinc_finger
XX
PN   WO9706255-A2.
XX
PD   20-FEB-1997.
XX
PF   05-AUG-1996;   96WO-IB01022.
XX
PR   22-DEC-1995;   95US-0576956.
PR   04-AUG-1995;   95US-0511485.
XX
PA   (UYOT-) UNIV OTTAWA.
XX
PI   Baird S,  Korneluk RG,  Liston P,  Mackenzie AE;
XX
DR   WPI; 1997-154262/14.
DR   N-PSDB; AAT70837.
XX
PT   Nucleic acid encoding an inhibitor of apoptosis polypeptide - used
PT   to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection
PT   of susceptibility to apoptotic disease
XX
PS   Claim 27; Page 72-74; 219pp; English.
XX
CC   Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and
CC   M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that
CC   are inhibitors of apoptosis (IAP) and which are characterised by
CC   the presence of a ring zinc finger domain (see also AAW19587) and at
CC   least one BIR (baculovirus IAP repeat) domain (see also AAW19588).
CC   The HIAP amino acid sequences were deduced from cDNA clones (AAT70837
CC   and AAT70838) from a human liver library.  IAP polypeptides can be
CC   expressed in host cells (in vitro or in vivo) and used in methods
CC   for treating diseases and disorders involving apoptosis, esp. in a
CC   human diagnosed as HIV-positive or as having AIDS, a
CC   neurodegenerative disease, a myelodysplastic syndrome or an
CC   ischaemic injury, seleted from myocardial infarction, stroke,
CC   reperfusion injury, or a toxin-induced liver disease.
XX
SQ   Sequence   604 AA;


  Query Match             98.9%;  Score 264;  DB 18;  Length 604;
  Best Local Similarity   97.8%;  Pred. No. 2e-25;
  Matches   45;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           ||:|||||||||||||||||||||||||||||||||||||||||||
Db     189 laragfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234


RESULT   8
```

```
AAW69295
ID   AAW69295 standard; Protein; 604 AA.
XX
AC   AAW69295;
XX
DT   13-NOV-1998  (first entry)
XX
DE   Human HIAP-1 protein.
XX
KW   Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
KW   proliferative disease; IAP; therapy; cancer; human; HIAP-1 protein.
XX
OS   Homo sapiens.
XX
PN   WO9835693-A2.
XX
PD   20-AUG-1998.
XX
PF   13-FEB-1998;   98WO-IB00781.
XX
PR   13-FEB-1997;   97US-0800929.
XX
PA   (UYOT-) UNIV OTTAWA.
XX
PI   Baird S,  Korneluk R,  Liston P,  Mackenzie AE,  Pratt C;
PI   Tsang B;
XX
DR   WPI; 1998-467164/40.
DR   N-PSDB; AAV55039.
XX
PT   Inducing apoptosis in proliferative mammalian cells with inhibitor
PT   of IAP or NAIP polypeptide - also methods for prognosis based on
PT   presence of IAP and NAIP, specifically applied to cancers involving
PT   p53 mutations
XX
PS   Disclosure; Fig 2; 147pp; English.
XX
CC   This sequence is the human HIAP-1 protein, which is a inhibitor of
CC   apoptosis protein (IAP), and can be used in the method of the invention.
CC   The method is for enhancing apoptosis in cells from a mammal with
CC   proliferative disease by treatment with a compound that inhibits
CC   biological activity of an IAP or NAIP polypeptide. The inhibitory
CC   compounds are used to treat proliferative diseases, specially cancers of
CC   ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney,
CC   liver nasopharnyx, thyroid,central nervous system, prostate, colon,
CC   rectum, cervix or endometrium, particularly to increase their sensitivity
CC   to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
CC   detected in many cancers and are associated with poor prognosis,
CC   resistance to chemotherapeutic agents and mutations in p53 (it is
CC   suggested that wild-type p53 suppresses transcription of the IAP or NAIP
CC   genes). Transgenic animals are used for testing the effects of antisense
CC   oligonucleotides and for screening for the inhibitors.
XX
SQ   Sequence   604 AA;


  Query Match             98.9%;  Score 264;  DB 19;  Length 604;
  Best Local Similarity   97.8%;  Pred. No. 2e-25;
  Matches   45;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           ||:|||||||||||||||||||||||||||||||||||||||||||||
Db     189 laragfyyigpgdrvacfacggklsnwepkdnamsehlrhfpkcpf 234


RESULT   9
AAU02925
ID   AAU02925 standard; Protein; 306 AA.
XX
AC   AAU02925;
XX
DT   12-SEP-2001  (first entry)
XX
DE   Angiotensin converting enzyme (ACEV) splice variant protein #25.
XX
KW   Angiotensin converting enzyme splice variant; ACEV; interleukin 6;
KW   granulocyte colony stimulating factor receptor; glucagon; hypertrophy;
KW   platelet-derived endothelial cell growth factor; cardiovascular disease;
KW   cellular tumour antigen P53; cyclin-dependent kinase inhibitor 1C;
KW   vasoactive intestinal polypeptide receptor 2; arteriosclerosis; cancer;
KW   myocardial infarction; coronary arterial thrombosis; renal disease;
KW   diabetic nephropathy; muscular disease; immune disorder; sarcoidosis;
KW   multiple sclerosis; immune complex nephritis; deep vein thrombosis;
KW   nonarcoidotic pulmonary granulomatous disease; endothelial abnormality;
KW   vascular disorder; asbestosis.
XX
OS   Homo sapiens.
XX
PN   WO200136632-A2.
XX
PD   25-MAY-2001.
XX
PF   17-NOV-2000; 2000WO-IL00766.
XX
PR   17-NOV-1999;   99IL-0132978.
PR   10-DEC-1999;   99IL-0133455.
XX
PA   (COMP-) COMPUGEN LTD.
XX
PI   Levine Z,  David A,  Azar I,  Khosravi R,  Bernstein J;
XX
DR   WPI; 2001-336004/35.
DR   N-PSDB; AAS06025.
XX
PT   Novel alternative splicing variants e.g. variant of angiotensin
PT   converting enzyme (ACEV), useful in identifying candidate compounds
PT   capable of binding to the variant and to detect anti-variant antibodies
PT   -
XX
PS   Claim 4; Fig 25; 519pp; English.
XX
CC   The sequence represents an angiotensin converting enzyme splice variant
CC   (ACEV) polypeptide. The polypeptides of the invention include variants of
CC   granulocyte colony stimulating factor receptor, glucagon, interleukin 6,
CC   platelet-derived endothelial cell growth factor, cyclin-dependent kinase
CC   inhibitor 1C, cellular tumour antigen P53, and vasoactive intestinal
CC   polypeptide receptor 2. The polypeptides and their associated nucleic
CC   acids are useful for identification of variant sequences and detection of
CC   candidate compounds capable of binding the molecules. The sequences of
CC   the invention can be used in the treatment and diagnosis of various
CC   disorders including cardiovascular diseases such as arteriosclerosis,
CC   myocardial infarction and coronary arterial thrombosis, renal diseases
CC   such as diabetic nephropathy, muscular diseases such as hypertrophy,
CC   immune disorders such as immune complex nephritis, multiple sclerosis,
CC   cancer, sarcoidosis, nonarcoidotic pulmonary granulomatous diseases such
CC   as asbestosis and vascular pathologies involving an endothelial
CC   abnormality such as deep vein thrombosis.
XX
SQ   Sequence   306 AA;


  Query Match             97.0%;  Score 259;  DB 22;  Length 306;
  Best Local Similarity   95.7%;  Pred. No. 4.3e-25;
  Matches   44;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           ||:|||||||||||||||||||||||||||||||||||||||||||| |||
Db     204 laragfyyigpgdrvacfacggklsnwepkdnamsehlrhfpncpf 249


RESULT  10
AAW13549
ID   AAW13549 standard; Protein; 46 AA.
XX
AC   AAW13549;
XX
```

DT 22-JUL-1997 (first entry)
XX
DE Human c-IAP1 repeat 2.
XX
KW IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW myocardial infarction; nephritis; HIV.
XX
OS Homo sapiens.
XX
PN WO9706182-A1.
XX
PD 20-FEB-1997.
XX
PF 06-AUG-1996; 96WO-US12860.
XX
PR 08-DEC-1995; 95US-0569749.
PR 08-AUG-1995; 95US-0512946.
XX
PA (TULA-) TULARIK INC.
XX
PI Goeddel DV, Rothe M;
XX
DR WPI; 1997-154209/14.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX
PS Claim 3; Page 24; 35pp; English.
XX
CC The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC AAT61590/T61591) comprise a series of defined structural domain
CC repeats and/or a RING finger domain; in particular, at least two of
CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC sequences derived from these human genes.
CC The nucleic acid is used for recombinant prodn. of human cellular
CC inhibitor of apoptosis protein which modulates apoptosis
CC regulation. The nucleic acids are useful in therapies where
CC increased cell-specific apoptosis is desired, e.g. in restinosis,
CC inflammatory disease states, myocardial infarction, glomerular
CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC They can also be used in conditions requiring a reduction in
CC apoptosis.
XX
SQ Sequence 46 AA;

Query Match 92.9%; Score 248; DB 18; Length 46;
Best Local Similarity 91.3%; Pred. No. 1.4e-24;
Matches 42; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||:|||||||||||||||||||||||||||||:||||| |||| |||
Db 1 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 46

RESULT 11
AAW04583
ID AAW04583 standard; Protein; 438 AA.
XX
AC AAW04583;
XX
DT 07-FEB-1997 (first entry)
XX
DE Human inhibitor of apoptosis gene 1.
XX
KW Inhibitor of apoptosis 1; hIAP-1; degenerative disease;
KW rheumatoid arthritis; septic shock; antiviral; trauma; stroke;
KW cell death; oncogenesis; cancer; diagnosis; therapy.
XX
OS Homo sapiens.
XX
PN WO9635703-A1.
XX
PD 14-NOV-1996.
XX
PF 11-MAY-1995; 95WO-US05922.
XX
PR 11-MAY-1995; 95WO-US05922.
XX
PA (HUMA-) HUMAN GENOME SCI INC.
XX
PI He WW, Hudson PL, Rosen CA;
XX
DR WPI; 1996-518608/51.
DR N-PSDB; AAT43709.
XX
PT Polynucleotide encoding human inhibitor of apoptosis gene 1 - useful
PT for treating degenerative diseases, as antiviral defence mechanism
PT and preventing cell death during trauma and strokes
XX
PS Claim 1; Page 40-41; 53pp; English.
XX
CC Human inhibitor of apoptosis 1 (hIAP-1) (AAW04583) is a protein
CC useful for treating degenerative diseases, rheumatoid arthritis,
CC septic shock, as an antiviral defence mechanism, and for
CC preventing cell death during strokes or trauma. Its amino acid
CC sequence was deduced from a cDNA clone (AAT43709) that can be obtd.
CC from human Jurkat cell lines or human osteoclastoma stromal cell
CC lines. Recombinant hIAP-1 can be produced in prokaryotic or
CC eukaryotic host cells, or expressed in vivo. It can also be used
CC to screen for modulators of hIAP-1 activity.
XX
SQ Sequence 438 AA;

Query Match 92.9%; Score 248; DB 17; Length 438;
Best Local Similarity 91.3%; Pred. No. 1.6e-23;
Matches 42; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||:|||||||||||||||||||||||||||||:||||| |||| |||
Db 24 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 69

RESULT 12
AAW19746
ID AAW19746 standard; Protein; 618 AA.
XX
AC AAW19746;
XX
DT 16-SEP-1997 (first entry)
XX
DE Human inhibitor of apoptosis protein homologue MIHB.
XX
KW Inhibitor of apoptosis protein; IAP; mammalian IAP homologue; MIHB;
KW degenerative disease; infectious disease; autoimmune disease;
KW cancer; therapy; diagnosis.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Region 46..113
FT /label= BIR
FT Region 184..250
FT /label= BIR
FT Region 269..337
FT /label= BIR
FT Region 569..606
FT /label= RING_finger
XX
PN WO9723501-A1.
XX
PD 03-JUL-1997.

```
XX
PF   20-DEC-1996;   96WO-AU00827.
XX
PR   22-DEC-1995;   95AU-0007275.
XX
PA   (AMRA-) AMRAD OPERATIONS PTY LTD.
XX
PI   Vaux DL;
XX
DR   WPI; 1997-350966/32.
DR   N-PSDB; AAT72711.
XX
PT   Isolated protein homologues of viral inhibitors of apoptosis - used
PT   to modulate apoptosis for treatment of degenerative, infectious or
PT   autoimmune diseases and cancer
XX
PS   Claim 8; Page 51-54; 136pp; English.
XX
CC   Mammalian IAP homologue B (MIHB) (AAW19746) is a human homologue of
CC   baculovirus inhibitor of apoptosis protein (IAP).  Its amino acid
CC   sequence was deduced from a cDNA clone (see also AAT72711) isolated
CC   from a human foetal liver cDNA library using primers based on
CC   human EST sequences that resembled the BIR repeats of Orygia
CC   pseudotsuguta polyhedrosis virus IAP.  IAP homologues (see also
CC   AAW19745 and AAW19747-52) and their derivatives and chemical analogues
CC   can be used in methods for modulating apoptosis in animal cells,
CC   specifically for treatment, by inhibition, of degenerative and
CC   infectious disease or, by promotion, of cancer and autoimmune
CC   disease.
XX
SQ   Sequence   618 AA;


  Query Match             92.9%;  Score 248;  DB 18;  Length 618;
  Best Local Similarity   91.3%;  Pred. No. 2.3e-23;
  Matches   42;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           ||:|||||||||||||||||||||||||||||:||||| |||| |||
Db     204 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 249


RESULT  13
AAW19583
ID   AAW19583 standard; Protein; 618 AA.
XX
AC   AAW19583;
XX
DT   02-SEP-1997  (first entry)
XX
DE   Human apoptosis inhibitor HIAP-2.
XX
KW   Apoptosis inhibitor; HIAP-2; HIV; AIDS; neurodegeneration;
KW   myelodysplastic syndrome; ischaemia; myocardial infarction; stroke;
KW   reperfusion injury; toxin-induced liver disease; gene therapy;
KW   diagnosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          46..113
FT                   /label= BIR-1
FT   Domain          184..250
FT                   /label= BIR-2
FT   Domain          269..336
FT                   /label= BIR-3
FT   Domain          560..605
FT                   /label= Ring_zinc_finger
XX
PN   WO9706255-A2.
XX
PD   20-FEB-1997.
XX
PF   05-AUG-1996;   96WO-IB01022.
XX
PR   22-DEC-1995;   95US-0576956.
PR   04-AUG-1995;   95US-0511485.
XX
PA   (UYOT-) UNIV OTTAWA.
XX
PI   Baird S,  Korneluk RG,  Liston P,  Mackenzie AE;
XX
DR   WPI; 1997-154262/14.
DR   N-PSDB; AAT70838.
XX
PT   Nucleic acid encoding an inhibitor of apoptosis polypeptide - used
PT   to inhibit apoptosis in e.g. HIV or AIDS patients, and for detection
PT   of susceptibility to apoptotic disease
XX
PS   Claim 27; Page 75-77; 219pp; English.
XX
CC   Human XIAP, HIAP-1 and HIAP-2 and murine M-XIAP, M-HIAP-1 and
CC   M-HIAP-2 (AAW19581-86) are a new class of mammalian proteins that
CC   are inhibitors of apoptosis (IAP) and which are characterised by
CC   the presence of a ring zinc finger domain (see also AAW19587) and at
CC   least one BIR (baculovirus IAP repeat) domain (see also AAW19588).
CC   The HIAP amino acid sequences were deduced from cDNA clones (AAT70837
CC   and AAT70838) from a human liver library.  IAP polypeptides can be
CC   expressed in host cells (in vitro or in vivo) and used in methods
CC   for treating diseases and disorders involving apoptosis, esp. in a
CC   human diagnosed as HIV-positive or as having AIDS, a
CC   neurodegenerative disease, a myelodysplastic syndrome or an
CC   ischaemic injury, seleted from myocardial infarction, stroke,
CC   reperfusion injury, or a toxin-induced liver disease.
XX
SQ   Sequence   618 AA;


  Query Match             92.9%;  Score 248;  DB 18;  Length 618;
  Best Local Similarity   91.3%;  Pred. No. 2.3e-23;
  Matches   42;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
           ||:|||||||||||||||||||||||||||||:||||| |||| |||
Db     204 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 249


RESULT  14
AAW13545
ID   AAW13545 standard; Protein; 618 AA.
XX
AC   AAW13545;
XX
DT   22-JUL-1997  (first entry)
XX
DE   Human c-IAP1.
XX
KW   IAP; inhibitor; apoptosis; RING finger domain; restinosis;
KW   myocardial infarction; nephritis; HIV.
XX
OS   Homo sapiens.
XX
PN   WO9706182-A1.
XX
PD   20-FEB-1997.
XX
PF   06-AUG-1996;   96WO-US12860.
XX
PR   08-DEC-1995;   95US-0569749.
PR   08-AUG-1995;   95US-0512946.
XX
PA   (TULA-) TULARIK INC.
XX
PI   Goeddel DV,  Rothe M;
XX
DR   WPI; 1997-154209/14.
```

DR N-PSDB; AAT61590.
XX
PT Nucleic acids encoding cellular inhibitor of apoptosis proteins -
PT useful for apoptosis regulation in cells to reduce or increase
PT apoptosis and for pharmacological screening
XX
PS Disclosure; Page 18-20; 35pp; English.
XX
CC The human cellular inhibitor of apoptosis proteins (c-IAP1/2 -
CC AAT61590/T61591) comprise a series of defined structural domain
CC repeats and/or a RING finger domain; in particular, at least two of
CC a first domain repeat (AAW13547 or AAW13548), a second domain repeat
CC (AAW13549 or AAW13550), and a third domain repeat (AAW13551 or AAW13552)
CC and/or a RING finger domain (AAW13553 or AAW13554), or a consensus
CC sequences derived from these human genes.
CC The nucleic acid is used for recombinant prodn. of human cellular
CC inhibitor of apoptosis protein which modulates apoptosis
CC regulation. The nucleic acids are useful in therapies where
CC increased cell-specific apoptosis is desired, e.g. in restinosis,
CC inflammatory disease states, myocardial infarction, glomerular
CC nephritis, transplant rejection and infectious diseases, e.g. HIV.
CC They can also be used in conditions requiring a reduction in
CC apoptosis.
XX
SQ Sequence 618 AA;

Query Match 92.9%; Score 248; DB 18; Length 618;
Best Local Similarity 91.3%; Pred. No. 2.3e-23;
Matches 42; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||:|||||||||||||||||||||||||||:||||| |||| |||
Db 204 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 249

RESULT 15
AAW69296
ID AAW69296 standard; Protein; 618 AA.
XX
AC AAW69296;
XX
DT 13-NOV-1998 (first entry)
XX
DE Human HIAP-2 protein.
XX
KW Inhibitor of apoptosis protein; apoptosis enhancer; NAIP polypeptide;
KW proliferative disease; IAP; therapy; cancer; human; HIAP-2 protein.
XX
OS Homo sapiens.
XX
PN WO9835693-A2.
XX
PD 20-AUG-1998.
XX
PF 13-FEB-1998; 98WO-IB00781.
XX
PR 13-FEB-1997; 97US-0800929.
XX
PA (UYOT-) UNIV OTTAWA.
XX
PI Baird S, Korneluk R, Liston P, Mackenzie AE, Pratt C;
PI Tsang B;
XX
DR WPI; 1998-467164/40.
DR N-PSDB; AAV55040.
XX
PT Inducing apoptosis in proliferative mammalian cells with inhibitor
PT of IAP or NAIP polypeptide - also methods for prognosis based on
PT presence of IAP and NAIP, specifically applied to cancers involving
PT p53 mutations
XX
PS Disclosure; Fig 3; 147pp; English.
XX
CC This sequence is the human HIAP-2 protein, which is a inhibitor of
CC apoptosis protein (IAP), and can be used in the method of the invention.
CC The method is for enhancing apoptosis in cells from a mammal with
CC proliferative disease by treatment with a compound that inhibits
CC biological activity of an IAP or NAIP polypeptide. The inhibitory
CC compounds are used to treat proliferative diseases, specially cancers of
CC ovary, breast, pancreas, lymph nodes, skin, blood, lung, brain, kidney,
CC liver nasopharnyx, thyroid,central nervous system, prostate, colon,
CC rectum, cervix or endometrium, particularly to increase their sensitivity
CC to chemotherapeutic agents. High levels of the IAP or NAIP proteins are
CC detected in many cancers and are associated with poor prognosis,
CC resistance to chemotherapeutic agents and mutations in p53 (it is
CC suggested that wild-type p53 suppresses transcription of the IAP or NAIP
CC genes). Transgenic animals are used for testing the effects of antisense
CC oligonucleotides and for screening for the inhibitors.
XX
SQ Sequence 618 AA;

Query Match 92.9%; Score 248; DB 19; Length 618;
Best Local Similarity 91.3%; Pred. No. 2.3e-23;
Matches 42; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Qy 1 LAKAGFYYIGPGDRVACFACGGKLSNWEPKDNAMSEHLRHFPKCPF 46
||:|||||||||||||||||||||||||||:||||| |||| |||
Db 204 laragfyyigpgdrvacfacggklsnwepkddamsehrrhfpncpf 249

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